

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001818**Date Inspected:** 24-Mar-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 830**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1930**Contractor:** Japan Steel Works, Ltd.**Location:** Muroran, Japan

<b>CWI Name:</b>	Chung Kuan and Makhmud Ashadi			<b>CWI Present:</b>	<b>Yes</b>	<b>No</b>
<b>Inspected CWI report:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Rod Oven in Use:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Electrode to specification:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Weld Procedures Followed:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Qualified Welders:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Verified Joint Fit-up:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Approved Drawings:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Approved WPS:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
				<b>Delayed / Cancelled:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Bridge No:</b>	34-0006			<b>Component:</b>	PQR Test Plate, SW-5-2 and Castings	

**Summary of Items Observed:**

On this date OSM Quality Assurance Representative Daniel L. Reyes observed the casting of the cable saddles, welding of the structural steel components and inspection relative to this project. The following was observed:

**Fabrication Shop**

At the start of the shift this QA inspector observed the welding and inspection of the Procedure Qualification Record (PQR) test plate identified as SW-5-2. The welding was performed by Japan Steel Works, Ltd. (JSW) welding personnel Ko Payashi ID 08-5023 utilizing the Shielded Metal Arc Welding (SMAW) process as per the Welding Procedure Specification (WPS) SJ-2942 WP-8 which was also used by Intertek Testing Services (ITS) Quality Control (QC) Inspectors Makhmud Ashadi and Chung Kuan as a reference. The size of the consumable utilized during the welding of the test plate was 4.0 millimeters and was identified as Hoballoy E9018-M H4R which is a product manufactured by Hobart Brothers.

Prior to welding the included groove angle of 45 degrees and the root opening of 6 millimeters was verified by the QC inspector Mr. Ashadi. The placement of the 50 millimeter test plate was positioned in the vertical plane and is to be welded in the 3G position with the welding starting at the bottom of the test plate and progressing upward to the top. At the conclusion of the fit-up verification Mr. Ashadi verified the minimum preheat temperature of 160 degrees Celsius and the welder Mr. Payashi commenced the welding of the root pass. At this time the QA inspector observed the QC inspector Mr. Kuan verify the amperage, voltage and the travel speed. The average welding parameters were observed as follows; 150 AC amps, 22.0 AC volts with a travel speed measured at 68 mm/m.

Later in the shift this QA inspector observed, at random intervals, the QC inspectors Makhmud Ashadi and Chung Kuan perform the in process weld inspection and verified the following; the minimum preheat temperature,

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maximum interpass temperature and the DCEP welding parameters. The welding of the Test Plate identified as SW-5-2 was not completed during this shift on this date and appeared to comply with the WPS.

### Foundry Shop

Later in the shift this QA inspector observed the ultrasonic testing of the West Deviation Saddle performed by JSW technicians Harumi Kohama and Atsusi Seino. Mr. Harumi Kohama and Mr. Atsusi Seino utilized the straight beam method and the ultrasonic instrument identified as a Krautkramer USM35. The ultrasonic testing was not completed during this shift on this date and appeared to comply with the contract documents. (See Digital Photographs)



### Summary of Conversations:

There were general conversations with the Bridge Group personnel Kunio Nagaya relative to the Procedure Qualification Record Test and the location of the welding personnel.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Venkatesh Iyer, (858) 967-6363, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Reyes,Danny	Quality Assurance Inspector
<b>Reviewed By:</b>	Brasel,Ron	QA Reviewer

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